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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Robert S. Swecker
BURNS, DOANE, SWECKER & MATHIS, L.L.P.
P.O. Box 1404
Alexandria, VA 22313-1404

EXAMINER

DENNISON, JERRY B

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/075,603

Applicant(s)

PREIS ET AL.

Examiner

J. Bret Dennison

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/15/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in response to Application Number 10/075,603 received on 15 February 2002.
2. Claims 1-16 are presented for examination.

Claim Objections

3. Claim 1 is objected to because of the following informalities: Claim 1 recites the limitation "agred upon". Appropriate correction is required.
4. Claim 14 is objected to because of the following informalities: It is uncertain if claim 14 is in Independent or dependent form based on the structure of the claim. Claim 14 should also be in sentence form.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claim 1 recites the limitation, "which each define an individual control system function in the application units and, in order to achieve a desired functionality for the control system interact with one another, or are capable of interacting with one another". It is vague and unclear to Examiner as to what this limitation means. Also, the use of the "or" limitation confuses the meaning of the claim. Appropriate correction is required.

Claim 1 recites the limitation, "the function node" in line 20. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests "the logic function node". Appropriate correction is required.

7. Claim 1 recites the limitation, "during a composition phase of the control system". It is unclear to Examiner what this limitation means. Examiner was unable to find the meaning of a "composition phase" in the specification. Appropriate correction is required.

8. Claim 1 recites the limitation, "the connected function means" in line 26. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

9. Claims 2 and 5 recite the limitation, "control system composition tool". It is unclear to Examiner what this control system composition tool is and how it is used for receiving the connection information. Appropriate correction is required.

10. Claims 3, 4 recite "a runtime interface". It is unclear to Examiner what a runtime interface is. Appropriate correction is required.

11. Claim 5 recites the limitation, "has a presentation means for displaying the function node which is implemented by it". Examiner is unclear as to what is being referred to by "it". Examiner is also unclear as to what is being displayed. Appropriate correction is required.

12. Claim 7 recites the limitation, "in which function means and connection means are separated from the negotiation means and the presentation means". It is unclear and vague to Examiner how they are "separated." Appropriate correction is required.

13. Claim 8 recites the limitation, "the function nodes" in lines 36-37. There is insufficient antecedent basis for this limitation in the claim. Examiner suggests "the one or more logic function nodes". Appropriate correction is required.

14. Claim 9 recites the limitation, "the function node" in line 5. Examiner suggests "the logic function node". Appropriate correction is required.

15. Claim 9 recites the limitation, "and/or". It is unclear to Examiner how to interpret this limitation. Appropriate correction is required.

16. Claim 9 recites the limitation, "a database for storing parameters relating to the function node". It is unclear to Examiner what these parameters are and how they are related to the function node. Appropriate correction is required.

17. Claim 10 recites the limitation, "having a number of software components as claimed in claim 1". It is unclear and vague to Examiner what software components this limitation is referring to. It is also unclear if this limitation is in dependent or independent form. Appropriate correction is required.

18. Claim 11 recites the limitation, "having a communication system for connecting the connection means of the software components (1, 2, 3) during a runtime". It is unclear to Examiner what the connection means is being connected to.

19. Claim 13 recites the limitation, "in order to achieve a desired functionality". It is unclear what this desired functionality is, and also what is causing reaching the desired functionality. Appropriate correction is required.

20. Claim 13 recites the limitation, "interact with one another, or are capable of interacting with one another". It is unclear to Examiner what the difference is. The use

of the word "or" makes the limitation confusing as to what is actually required in the claim. Appropriate correction is required.

21. Claim 14 recites "A method for designing a control system having the following steps: -In a control system composition tool, connecting the negotiation means of at least two software components as claimed in one of claim 1". There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

22. Claims 1-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed towards software components not tangibly embodied in a manner so as to be executable and are thus non-statutory for failing to be in one of the categories of invention. Claims 1-16 are also directed towards intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. The intended use must result in a manipulative difference as compared to the prior art.

Examiner Remarks

23. Before an art rejection, Examiner would like to point out that the 101, and 112 issues are causing ambiguities that make it difficult to perform a proper search and

consideration of the claimed invention. The invention as presently claimed and understood by Examiner is nothing more than nodes setting up connections to interact with one another. Two nodes negotiating connection settings is the same as the two nodes setting up a session for communication. It is also inherent that two nodes that are already communicating had to have come to an agreement for using a specific protocol and setting up communication parameters in order to communicate. The prior art used in the following rejection includes a new node joining the system, which means it would have to set up the proper protocol/parameters for communication with the other nodes.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Gregerson et al. (U.S. Patent Number 5,526,358).

24. Regarding claims 1, 13, and 14-16, Gregerson disclosed a software component (1, 2, 3) for a distributed control system having application units (4, 5) which comprise one more logic function nodes which each define an individual control system function in the application units and, order achieve a desired functionality for control system

interact with one another, or are capable of interacting with one another; said software component (Gregerson, col. 5, lines 1-15) comprising:

a function means for implementation of a logic function node (Gregerson, col. 12, lines 10-30);

a negotiation means receiving a connection instruction relating connection to be set up to at least one further function node and for agreeing upon possible usable connection parameters between the function node and least one further function node during composition phase of the control system (Gregerson, col. 5, lines 45-65, col. 6, lines 9-20); and

a connection means for setting the connection parameters agreed upon between the function means and for data transmission between the connected function means during a runtime of the control system (Gregerson, col. 5, lines 45-65, col. 6, lines 25-35, Gregerson disclosed the nodes setting up sessions).

25. Regarding claim 2, Gregerson disclosed the limitations, substantially as claimed, as described in claim 1, including the software components characterized in that the negotiation means has a composition interface for communication with a control system composition tool for receiving the connection information (Gregerson, col. 5, lines 20-40); and

a system interface (1b, 2b, 3b) for communication with other software components during the negotiation (Gregerson, col. 6, lines 55-60).

26. Regarding claim 3, Gregerson disclosed the limitations, substantially as claimed, as described in claim 1, including the software components characterized in that the connection means has runtime interface (1c, 2c, 3c) for data transmission between the connected function nodes (Gregerson, col. 5, lines 35-40, col. 6, lines 55-60).

27. Regarding claim 4, Gregerson disclosed the limitations, substantially as claimed, as described in claim 3, including the software components characterized in that the runtime interface (1c, 2c, 3c) is connectable via a network structure to runtime interfaces (1c, 2c, 3c) of other software components (Gregerson, Fig. 1, 27)

28. Regarding claim 5, Gregerson disclosed the limitations, substantially as claimed, as described in claim 1, including the software components characterized in that said software component furthermore has a presentation means for displaying the function node which is implemented by it, in a control system composition tool (Gregerson, col. 20, lines 1-11).

29. Regarding claim 6, Gregerson disclosed the limitations, substantially as claimed, as described in claim 1, including the software components characterized in that said software component comprises a communication channel between the connection means and the negotiation means for transmitting the connection parameters which have been agreed upon by the negotiation means to the connection means (Gregerson, col. 6, lines 55-60).

30. Regarding claim 7, Gregerson disclosed the limitations, substantially as claimed, as described in claim 1, including wherein said software component is a distributed system, in which function means and connection means are separated from the negotiation means and presentation means (Gregerson, col. 5, lines 1-25, col. 20, lines 1-10, Gregerson disclosed applications located on different nodes of the system).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gregerson in view of Wimmer et al. (U.S. Patent Application Publication 2002/0059477).

31. Regarding claim 8, Gregerson disclosed the limitations, substantially as claimed, as described in claim 1. However, Gregerson did not explicitly state that the function nodes are logical nodes in the sense of IEC Standard 61850. In an analogous art, Wimmer disclosed a configuration of a control system where logical nodes are based from the IEC Standard 61850 (Wimmer, page 2, paragraph 25).

Wimmer is analogous to Gregerson because Wimmer provides an automated control system that determines configuration parameters for control system functions

and communication units, which are loaded into the corresponding control system functions or devices (Wimmer, page 1, paragraph 10).

Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate the teachings of Wimmer into Gregerson to provide a method and computer program product for configuration of a control system which automates the configuration process (Wimmer, page 1, paragraph 4).

32. Regarding claim 9, Gregerson and Wimmer disclosed the limitations, substantially as claimed, as described in claim 1, including a database for storing parameters relating to the function node and/or relating to possible connections (Gregerson, col. 11, lines 5-25). See motivation above.

33. Regarding claim 10, Gregerson and Wimmer disclosed the limitations, substantially as claimed, as described in claims 1, including having a control system composition tool for connecting negotiation means of the software components (1, 2, 3) (Gregerson, col. 6, lines 55-60); and

having a communication system for connecting the connection means of the software components (1, 2, 3) during a runtime (Gregerson, col. 6, lines 55-60).

34. Regarding claim 11, Gregerson and Wimmer disclosed the limitations, substantially as claimed, as described in claim 10, including wherein the communication system is a network (Gregerson, Fig. 1, 27).

35. Regarding claim 12, Gregerson and Wimmer disclosed the limitations, substantially as claimed, as described in claim 10, including wherein said control system has a negotiation communications system via which the negotiation means and the control system composition tool can communicate with one another (Gregerson, col. 6, lines 9-20).

Conclusion

It is presumed that claims 1-12 and 14-16 invoke "means plus function" language and interpretation in accordance with 35 USC 112 sixth paragraph. In order to verify and ascertain the metes and bounds of the claimed invention, Applicant is requested to isolate the portion(s) of the specification which dictates the structure relied on for proper interpretation if this presumption is appropriate.

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.


In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure

relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

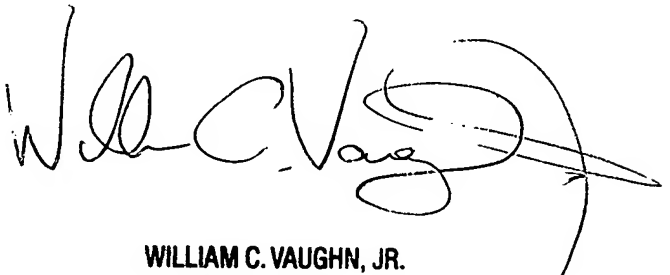
Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (571) 272-3910. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



J. B. D.
Patent Examiner
Art Unit 2143



WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER